Rombough, Kyrik

From: Smith, Kim
Sent: Thursday, November 06, 2008 12:57 PM
To: Pirner, Steve; Gustafson, Brian; Rombough, Kyrik
Cc: Tollefsrud, Tim; Duvall, Ron
Subject: FW: Atten: Steven Pirner

Steve,

Hyperion comments addressed to you.

Kim
-----Original Message-----
From: James F. Heisinger [mailto:jheising@value.net]
Sent: Thursday, November 06, 2008 12:39 PM
To: DENR INTERNET INFORMATION
Subject: Atten: Steven Pirner

Dear Secretary Pirner,

I have attached my comments concerning the air permits for the HYperion Energy Center. I hope I can receive a reply to my questions.

James F. Heisinger

Administrator
Air Quality Program
Department of Environment and Natural Resources
523 East Capitol, Joe Foss Building
Pierre South Dakota 57501

I am a resident of Clay County and a retired physiologist with training and research experience in environmental toxicology. Naturally, I have an intense interest in The Hyperion Energy Center (HEC). As a retired government employee I have a high level of trust in South Dakota agencies. The DENR's entrusted duties include the protection of public health and the environment, conserving natural resources while promoting economic development. These sometimes conflicting goals demand good science. As I examine the draft air permit I find omissions that are difficult to reconcile with a reasonable approach to the scientific method.

I am particularly interested in heavy metals, their emissions, deposition, environmental changes, and health effects. Unfortunately, there is no way to consider the emission controls since you fail to require a description of the crude that will be refined. The draft does not contain a table showing an analysis of the crude chemical content. **Please send me that information.** No range is given even for simple things like crude oil gravity.

What are the physical forms of emitted metals? Mercury, for example, might be emitted as elemental, ionic or as an organic mercury compound**. Since it can be scrubbed to some extent how will the removed forms be eliminated?** Of course arsenic and other metals and metalloids are also abundant in Tar Sands crude. There needs to be a review of persistent and bio-accumulative toxicants in the soil. The modeling should cover a larger area than that used in the draft. **Why did you neglect to include background pollution levels in Sioux City Iowa?**

Perhaps these questions could be answered most easily by an Environmental Impact Statement (EIS). A more holistic view would allow the interested citizen to understand the fate of the substances that will leave the site. **Will they leave in the air, the water or …?** Having 13 or so permits makes for a hopelessly confusing gaggle of disconnected technical bits and pieces. **Please explain why you think concerned citizens will be best informed when the relevant information will be released over a very long period of time and in tiny packets?**

Since oil sand crude will be used it will have high sulfur content (certainly higher than 1% of the weight). However, once again, there is no list of range for sulfur content. Sulfur emissions will give rise to odor. That is not a secret, but with the present permit system there will be no examination of odors. A required EIS prior to issuing permits would clarify the problems that lie ahead for local residents. It would also allow residents to question best available control technologies that appear to be woefully lacking in the draft air permit. **How will you protect citizens from odor and how will you force it to be considered when no odor permit is required?**

The lack of information concerning the crude is lamentable. The citizens living near the site will suffer a double disaster if the source of the crude becomes unavailable. An EIS could determine if a clear and constant source of crude might be available in the future. Without knowledge of the supply source, pipeline availability, up-graders and diluents, how can scientists approve this uncertain future? The social and economic impacts of a failed refinery would be a disaster that should have been avoided. **Since a complete EIS would give a brief examination of the crude from its origin to the final product, why don't you require an EIS or require the information be made public in some other fashion?**

Will modern monitors be located outside of the facility to capture an analysis of total emissions? Will it be DIAL (Differential Absorption Light Detection), or something far less powerful? I did not find this information in the draft permit.

As the world rushes toward the unknowns of climate change don't you think it would be wise to force HEC to decide what method(s) of carbon dioxide disposal they will use? Simply being carbon capture ready does not tell us much. A vague suggestion of putting it in a solid form for burial or perhaps pumping it underground is certainly futuristic. However, it does not solve the problem. **Shouldn't this "green refinery" be required to be realistic and discuss alternatives in more detail? Where is a complete discussion of the Best Available Control Technologies (BACT) for these futuristic alternatives? How about including a list of the other Greenhouse Gases that will be emitted?**

As I look at the numerous form letters that you are receiving I am struck by the many requests to "approve the air permit for the proposed refinery without delay". Why rush? This is the biggest industrial facility ever built in South Dakota. It has vast potential for health and environmental impacts? Why rush when it appears that Particulate Matter emissions/barrel of finished product will be greater than those at the Rosemont Minnesota refinery? That refinery was built many years ago and also uses sour crude. Please realize that the promotion of economic development is only one of your charges.

Sincerely,

James F. Heisinger
2118 Old Bridge Road
Vermillion SD 57069